

ENDOCRINOLOGY CASES

CASE 1

A female patient 46 years old, non smoker goes to her GP because she has become increasingly overweight. She has gained 9 Kg in weight over the past 6 months. She also noticed that she was bruising easily. She found difficulty to get up from her chair or to climb stairs. She felt depressed and found herself waking early in the mornings. She had no previous physical or psychiatric illnesses.

ms weakness (proximal muscles)

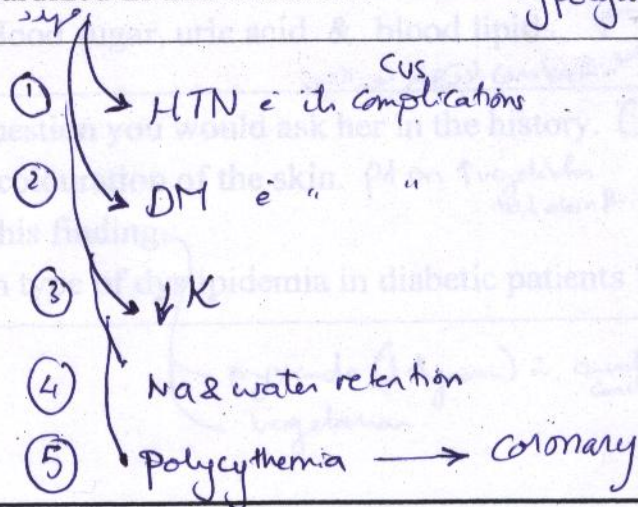
On examination:

- o She is overweight particularly in the abdominal region.
- o Skin bruises.
- o Grade 3 motor power in shoulder abduction & hip flexion.
- o Peripheral oedema.
- o Hyperpigmented skin patches.

Cushing

52

1. What is your likely diagnosis ?? *Cushing syndrome disease due to pit Adenoma*
2. How can you confirm your diagnosis by investigations ?? *diagnose Cushing*
3. What is the cause of peripheral oedema ?? *reabs. Na* *diagnose cause (adenoma)*
4. When can this oedema disappear without treatment ?? *if complicated by polyuria*
5. How can the heart be jeopardized in this disease ??



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CASE 2

A female patient 17 years old was discovered to be diabetic on presenting to the outpatient clinic suffering from general illhealth and weakness.

1. What types of DM may this young lady have ??
2. Mention the mechanisms underlying the more common type..
3. What are the acute conditions that can complicate this type ??

Macrovascular

- Neuro No. 1 → Cerebral
- Chest Pneumonia
- Pregnant ♀ (5)

eye - VH, RD

SKn - infectn Abscess

KA - infectn Cystitis PN (ANP)

coma - DKA hypoglycemia

The patient received her ttt regularly & was properly controlled for nearly 5 months. Then she started to suffer from repeated acute attacks of hypoglycemia. Her doctors realized that the dose of insulin she was receiving was big & so they reduced it.

1. What is the reaction of the body to the occurrence of hypoglycemia ??
2. How do you explain the occurrence of this hypoglycemia in this case ??

honeymoon due to temporary stability of B cells (needs ↓ dose)

The patient used to visit the clinic regularly for follow up & her blood sugar was controlled on insulin & diet treatment. During one of her visits, the doctor noticed yellow discolouration of her skin. Some routine investigations were asked in the form of: liver functions, renal functions, blood sugar, uric acid & blood lipids.

1. Mention one important question you would ask her in the history.
2. Explain the yellowish discolouration of the skin.
3. Mention other causes of this finding.
4. What is the most common type of dyslipidemia in diabetic patients ??

- ① ↑ TG
- ② ↑ HDL
- ③ LDL → no in

myxoma (↓ thyrox) in. causes Carotenes → vit A

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CASE 3

A male patient 28 years old was diagnosed as having pulmonary TB in a TB sanatorium. He was given his medication & advised to come to the clinic every month for follow up investigations & to receive his monthly ttt. The patient received his treatment for only 3 months & then he neglected everything. So he came back 4 months later with marked weakness, fatigue and marked loss of weight. He also complained of persistent diarrhea during the last 4 months together with occasional abdominal colics & polyuria.

On examination:

- o Pallor.
- o Hyperpigmentation especially noted in some areas of his body.

1. What is your possible diagnosis ?? *Addison's due to TB*
2. How would you confirm your diagnosis by investigations ?? *level of Blood Electrolytes & ACTH ↑*
3. What caused the problem ?? *discontinuation of AT-TB → extra pulm. spread*
4. What is the most common cause of this disease ?? *autoimmune 80%*
5. Enumerate other endocrinal causes of chronic diarrhea *DM, Hypoparathyroidism, carcinoma, Z.E. Syndrome*
6. Mention an important point in general examination in this patient.
7. Explain the following features in the patient:
 - o Abdominal colics. *Hypotension*
 - o Marked weakness, fatigue & marked loss of weight. *↑K, ↓Na, ↓Ca, ↓Androg*
 - o Polyuria. *Na diuresis / Osmotic*
 - o Pallor. *addison / TB*
8. In which special areas was the hyperpigmentation found ? What caused it ?
9. How would you treat this patient ?? *ACTH ↑, MSH ↑*

ttt by Cortisol

if no response

fluorocortisol (Allostend)

SK: m.m.

mouth

Rectum

CASE 4

A female patient 27 years old came presented to the ER with **DCL**, severe vomiting & abdominal pain. Her relatives said that she has been suffering from **polyuria** since few months, She was getting up to pass urine 5 times a night. About 1 week ago, she developed abrupt onset of severe **thirst** and **polyuria**. They also stated that she had **bony pains**, **backache** and persistent constipation.

On examination:

- o BP: 110 / 80.
- o Pulse: 50 / min, extrasystoles.
- o Temp.: 37 °C.
- o RR: 19 / min.
- o Skin: dry inelastic skin with scratch marks.
- o Decreased JVP.

Investigations revealed:

- o Plain UT: renal stones.

1. What are the **2** most likely diagnoses arranged in order ??
2. Explain the presence of polyuria in either cases.
3. Explain the presence of renal stones in either cases.
4. Name another disease with the combination: "itching + bradycardia".
5. Comment on the BP.

not high as expected
(due to resistance to insulin)
but here not high due to hypernatremia (polyuria)

① HyperPara → Hypercalcemic crisis

② DM (Diabetic com)

① Nephrogenic DI

② osmotic diuresis

① ↑Ca

② infection (DM)

G.J.

The patient was managed from this problem, and was advised as regards her definitive treatment, BUT: she refused & went home. Two years later she came back with general illhealth, confusion, vomiting, pericarditis, earthy look and **ammoniacal mouth odour**.

hypernatremia & lipids
→ nephrocalcinosis
→ CRF

1. What is your diagnosis ??
2. What do you expect to find the serum potassium ?? ↑K

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- alcohol : intoxication
- fever : LQ
- acetone : DKA
- dehydration : CRF

WhiteKnightLove

CASE 5

A 60 years old male, obese, heavy smoker who has been on insulin and metformin for 12 years presents with: breathlessness, sweating, vomiting and acute abdominal pain. He also suffered from a severe attack of acute chest pain: diffuse retrosternal radiating to the left arm that lasted for one hour & was partially relieved by drugs. His blood sugar was markedly elevated: 550 mg / dL.

obese
heavy smoker
appetite
insulin

obese
heavy smoker
DM

II → I

On examination:

- BP: 100 / 60.
- Pulse: 130 / min, weak.
- Temp.: 37.7 °C.
- RR: 34 / min (deep respiration).

silent
respiratory
autonomic neuropathy

stress (ppt factor)

DKA

Kussmaul's

not Hyperosmolar
Non ketotic
acidosis
not Lactic acidosis

- What is the probable diagnosis of the patient's condition??
- Mention 3 most important investigations. ECG, enzymes, urine G. ketone
- Mention 3 possible explanations for the acute abdominal pain.

DKA precipitated by AMI

The patient's overall management was started.

DKA K.B → irritator
Gastroperiesis
MI if inferior → radiate to epigastrium

- What are the types of fluids required to this patient?? (4) Saline 5% glucose & HCO₃ K (if ↓ K)
- How would you administer insulin after control of the acute condition?? aspartate

Multiple daily S.C. injects

The patient stayed in hospital thereafter for 2 more weeks during which his overall condition stabilized & his blood sugar was perfectly controlled. He was discharged & put on a total daily dose of 60 units of insulin mixtard to be administered in 2 divided doses (morning & evening).

- Calculate the proper morning & evening doses. 40, 20
- What are the advantages of human insulin & insulin pump??

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less allergic
no IR

CASE 6

A 53 years old obese man, hypertensive on amlodipine 5 mg / day presented to the outpatient clinic for follow up of his blood pressure.

On examination:

- BP: 150 / 100. = uncontrolled (140/90 في)
- BMI: 36 Kg / m². = Moderate obesity
- Chest, heart, abdominal & neurological examination were free.
- LLs: mild oedema.

Investigations revealed:

- FBS: 119 mg / dL.
- 2hpp: 177 mg / dL.
- Hypercholesterolemia, Hypertriglyceridemia. ^{LDL}
- Normal liver and kidney functions.
- Urine analysis: normal.

IFG = Hyperglycemia
IGT

Syndrome X

HTN
obese
dyslipidemia
Hyper Glycemia

1. What is your possible diagnosis ??

2. How can you explain the oedema in this patient ??

3. Suggest a suitable drug to control the patient's BP.

Amlodipine (reversible edema)
(CCB) → ankle

لأنه أبلغه عن علة عال
edema
وأعطاه دواء آخر

A → ACEI
B x → ARBs

حلو

Diabetic nephropathy

D x → Diuretic
DM

طرق العلاج الجارية
فكر في دواء

Heart x
Natr. x
Liver x
Kid x
Allergic x

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① ACEI

② CCB → PAD

VD

White Knight Love

TRUE OR FALSE

- Insulin stimulates glycogenesis & gluconeogenesis. X
- DKA may be occur during the use of insulin pump. ✓
- Absence of glycosuria excludes diabetes. X *fasting 140 → ولا يزال العسل 180 إلى 200*
- Rosiglitazone is a benzoic acid derivative that increases insulin secretion. X *Repaglinide*
- DKA may be the first presentation of diabetes. ✓
- Diabetes may occur due to liver failure, renal failure & adrenal failure. X
- C – peptide is an important investigation for monitoring of diabetes. X *insulinoma from exogenous*
- Sulphonylurea therapy in diabetes decreases the number of peripheral insulin receptors. X
- In the management of newly-diagnosed 30 – year – old diabetes, insulin requirements during the first 8 weeks often decrease. ✓ *honeymoon*
- Polyphagia occurs in diabetes due to ↓ glucose uptake in the cells of the satiety centre of the hypothalamus. ✓
- Monozygotic twins show approximately 100 % concordance for NIDDM. ✓
- Hypercholesterolemia is a finding in hypothyroidism. ✓
- Chlorpropamide is an oral hypoglycemic drug that stimulates insulin secretion. ✓
- Hypoglycemia may occur due to hypopituitarism or hypothyroidism. ✓
- Obesity may occur due to hypercorticism or hypothyroidism. ✓ *easy*
- HbA1c is a sensitive screening test in diabetes. X *monitoring*
- Honeymoon phase is associated with temporary β cell improvement in type 2 diabetes. X *①*
- ARBs represent a good choice in treating diabetic nephropathy. ✓ *stage 2*
- In diabetes during pregnancy, the baby is usually smaller than expected from gestational age. X
- ACE – Is represent the antihypertensive therapy of first choice for the ttt of type 1 diabetes. ✓
- Repaglinide is a PPARγ agonist that decreases insulin resistance. X
- Increased serum prolactin concentration occurs in hypothyroidism. ✓ *galactorrhea*

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- Missed meal is a very important cause of hypoglycemic coma. ✓
- Hyperkalemia is a typical finding during the ttt of DKA. ↓K X
- In diabetes, glycosuria is usually due to reduced renal threshold. Kidney X
- In type II diabetes, there is a clear evidence of autoimmunity. X
- Obesity predisposes to NIDDM in genetically susceptible individuals. ✓
- Insulin requirements usually decrease throughout pregnancy. act insulin? X
- Hypoglycemia is associated with tremors, palpitation & dizziness. Adrenaline ↓G ✓
- In diabetes, carbohydrate intake should be 50 % of the total caloric intake. ✓
- Mild diabetes during pregnancy responds well to sulphonylurea & diet therapy. teratogenic X
- Severe hypoglycemia occurs in chronic & not in acute liver cell failure. Sx ✓
- In myxoedema, low serum free T3 precedes an ↑ in serum TSH concentration. X
- Sulphonylurea therapy in diabetes causes more weight gain when given with biguanide therapy. X
- In the management of newly-diagnosed diabetes, HbA1c should be monitored weekly. X
- In the management of DKA, glucose should be avoided unless hypoglycemia occurs. 250 X
- In diabetes, neuropathy may present with sudden death. autonomic neuropathy ✓
- In diabetes, microalbuminuria suggests renal tubular dysfunction. glomerular silent AMI X
- AMI & stroke are recognised precipitating factors for DKA, hyperosmolar non-ketotic coma & hypoglycemic coma. X
- Lactic acidosis may occur due to toxicity of biguanides & morphine. ↓RC hypoxia ✓
- Tetany occurs due to alkalosis, hypocalcemia & hypokalemia. ↓Mg X
- Polyuria is a recognised manifestation of Addison's disease & Cushing's syndrome. ✓
- Sudden withdrawal of corticosteroids may result in an emergency. Na K ✓
- Glucose toxicity occurs in type 1 diabetes. also lipotoxicity Add. cu ✓
- MODY represents a genetic defect resulting in insulin resistance. X